



NON-PROVISIONAL PATENT APPLICATION

**TITLE OF INVENTION**

A system and method to give a true indication of respondent satisfaction to an electronic questionnaire survey.

**CROSS-REFERENCE TO RELATED APPLICATIONS**

This non-provisional utility patent application hereby claims the benefit of the provisional utility patent application 60/431,993 filed on 10<sup>th</sup> December, 2002 with the title "A system and method to give a true indication of respondent satisfaction to an electronic questionnaire survey" on which this current application is based.

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## DESCRIPTION

A system and method to give a true indication of respondent satisfaction to an electronic questionnaire survey

## BACKGROUND OF THE INVENTION

Field of the invention:

The present invention relates to a system and method to give a true indication of respondent satisfaction to an electronic questionnaire survey from a plurality of respondents. More particularly, but not exclusively, the invention relates to a system and method for companies to accurately measure employee satisfaction and customer satisfaction efficiently and reliably.

Description of Related Art:

Before the advent of computers, the only way to conduct a questionnaire survey was by using a traditional pen and paper method. This tried and trusted approach asked respondents a number of questions to which the answers could be a simple yes/no, a multiple choice type of response, a multiple selection type of response or a value on a scale (for example ranging from 'I fully agree' through 'I don't have an opinion' to 'I don't agree'). By using various techniques such as repeat questions, it was also possible to qualify the respondent's answers to some extent.

For this type of questionnaire survey, an assessment of the results is typically based upon a statistical analysis of the answers given. Whereas this is a useful tool and much can be read into such a statistical analysis, the actual interpretations of the results can vary, depending on the assessor. Such a system is also open to abuse: the author is aware of situations where such an analysis has been interpreted in order to meet a customer's expectations – something which defeats the whole object (and cost) of the exercise.

The development, deployment, collation and assessment of such pen and paper questionnaire surveys were, and still are, typically highly labour intensive, even for small sample sizes, and as a result expensive.

With the introduction of computers and also Wide Area Networks (WANs) it became possible to harness the computer's power to alleviate some of the manual work in the whole questionnaire survey process by using, as an example, email and/or the internet to distribute and collate questionnaire surveys. Despite being able to simplify certain parts of the

questionnaire survey process the process still remained highly labour intensive at the survey creation and survey analysis stages.

As computers became more powerful they also became easier to use (due to a plethora of diverse software being available to simplify the majority of daily tasks across all walks of life) impacting electronic versions of questionnaire surveys also. Not only were Internet based questionnaires becoming easier to manage and thus produce, but also so-called 'kiosk' survey systems were being set up (using dedicated standalone input systems in public places to attract the general public to take part in a survey).

Today there are many diverse applications for generating electronic questionnaire surveys available from the simple questionnaire surveys available free of charge on the Internet through to more complex software product offerings, where techniques such as 'branching' (the questions being asked being dependent on previous answers given) and 'inconsistency testing' (to determine whether questionnaire responses derive from a computer, or from a human not paying attention) are used to qualify the responses obtained.

Despite the large number of alternative choices available today for conducting an electronic questionnaire survey, all require the data to be analysed once the inputs have been collated. Due to the very nature of an electronic questionnaire survey this is almost always based on statistics, requiring interpretation by a human. Herein lies the fundamental problem:

#### Problem analysis:

As mentioned previously, one of the main problems with depending on a statistical analysis is that it can be interpreted in numerous different ways, with each way having a different implication. As such, a statistical analysis only becomes useful when conducted more than once and where the trends between each analysis are measured, ensuring each time that the same analysis techniques are used. To get the most out of a questionnaire survey, therefore, requires either running the same questionnaire a number of times over a certain time period and monitoring the trends, or running the same questionnaire survey numerous times in parallel and comparing the results, ensuring each time that exactly the same technique is used to interpret the results.

However, there are several reasons why questionnaire surveys can not be run so frequently: firstly, as has been mentioned before, the costs involved can be prohibitive; secondly, finding people to survey and continue surveying becomes increasingly difficult with time – any

'novelty effect' wearing off very quickly – and using incentive programmes (a technique commonly used to increase the number of willing survey participants) also becomes expensive with time.

A second issue concerning questionnaire surveys specifically designed to measure respondent satisfaction (although not exclusively), is the time factor. Respondent satisfaction is very time dependent - one only has to monitor political opinion poll results to verify this. If a survey takes any length of time to complete, collate and analyse, the results thus obtained may no longer necessarily reflect the sentiments of those respondents at the time of the final result (although they were representative when the questionnaires were complete).

A third issue concerning questionnaire surveys specifically designed to measure respondent satisfaction (although not exclusively), is the fact that such questionnaires are answered emotionally rather than rationally and are therefore unlikely to be a true reflection of respondent satisfaction (emotions, being based on human feelings, are never stable, whereas satisfaction is an average measure of emotions over time). Also, asking a respondent to state their opinion (on which satisfaction is based) in a questionnaire is extremely difficult due to opinions being inherently analogue in nature, and trying to measure an opinion in an analogue fashion (from negative to positive in 10 steps, say) is also difficult to interpret (is the respondent who answers a question requesting an opinion on a subject in hand with -4, for example, really more dissatisfied than a respondent who answers the same question with -2?).

A final issue concerning questionnaire surveys specifically designed to measure respondent satisfaction (although not exclusively), is in summarising the results: If the same question is asked to two different respondents, where the response to be given is based upon a ten step scale (as discussed above) and one answers with +2 and the other with +8, summarising these results would give a value of +5. This may not, however, truly represent the combined feeling of both respondents. If, for example, the respondent with the +8 response was more convinced about their response than the respondent with the +2 response, then a true representation of the summary of these inputs would be expected to be +6 or +7. Such a result can only be obtained in a summary if the 'level of conviction' of the respondent is also taken into account in the results and therefore the end calculation - something which current survey techniques do not accomplish.

## BRIEF SUMMARY OF THE INVENTION

From a first perspective of the present invention, a way of presenting a survey questionnaire electronically to a respondent or plurality of respondents is provided so that a respondent is forced to answer the same set of survey questions both emotionally and rationally. The invention also ensures that the resulting responses to both sets of survey questions are given calculated values based upon the respondent's level of conviction. By comparing the results of the emotional and rational responses, a true value of respondent satisfaction can be obtained. This ensures a better quality of data for the statistical analysis stage.

From a second perspective of the present invention, a way of presenting a survey questionnaire electronically to a respondent or plurality of respondents is provided so that a questionnaire is presented, the inputs analysed and an output derived which is both independent of human intervention and therefore repeatable and able to be conducted within a short time frame (typically within a week).

From a third perspective of the present invention, a way of presenting a survey questionnaire electronically to a respondent or plurality of respondents is provided so that the respondent does not feel burdened by partaking in the survey, by ensuring the respondent is able to complete the questionnaire both anonymously and within a short time span (typically less than 5 minutes) and is assured of an assessment of their own inputs immediately following completion of the questionnaire survey.

From a fourth perspective of the present invention, a way is provided to centrally co-ordinate the distribution of questionnaire surveys for a plurality of questionnaire survey originators for those surveys where such a feature would be beneficial, so that not only can the questionnaire survey originator see the results for their own company, but also for their company's entire industry, which, because of the repeatability of the present invention, now becomes possible. The said questionnaire survey originator means the individual or company conducting the questionnaire survey.

**BRIEF DESCRIPTION OF THE DRAWINGS:**

Figure 1: shows a summary of the entire questionnaire survey process for the present invention

Figure 2: shows a summary of the questionnaire survey set-up stage

Figure 3: shows a preferred embodiment of a questionnaire distribution

Figure 4: shows a typical data base entry requirements for a questionnaire survey

Figure 5: shows a summary of the questionnaire survey fulfilment stage

Figure 6: shows a break down of the Company Ranking stage

Figure 7: shows a break down of the Respondent Ranking stage

Figure 8: shows a typical output from the Display Summary stage

Figure 9: shows a summary of the questionnaire survey results analysis stage

Figure 10: shows a typical Executive Summary output

Figure 11: shows a typical statistical analysis for a Category

## DETAILED DESCRIPTION OF AND THE BEST MODE OF CARRYING OUT THE INVENTION

In a preferred embodiment of the present invention a questionnaire survey consists of four distinct phases, summarised in Figure 1. The questionnaire survey set-up phase (001) defines the questions according to a strict set of guidelines; the distribute questionnaire survey phase (002) selects the best method of distributing the questionnaire survey according to the target respondents' requirements and/or expectations; questionnaire survey fulfilment (003, 004, 005) is where the survey is completed by the respondent or plurality of respondents; the questionnaire survey results analysis phase (006) is where the respondents inputs are statistically analysed and reported.

### Questionnaire survey set-up phase (001):

The method used for the questionnaire set-up is summarised in Claim 2 and illustrated in Figure 2. The first task is to break the survey subject matter down into a number of different ranked Categories (010), with the highest priority category taking first position and assigning a value to each category depending on its position ( $C_N..C_1$ , where N indicates the highest rank). As an example, if the survey subject matter were for a Customer Satisfaction Survey, the Categories could be defined and assigned values as follows:

- a) Product Positioning                      - assigned value = 4 ( $=C_4$ )
- b) Customer Service                        - assigned value = 3 ( $=C_3$ )
- c) Total Quality                              - assigned value = 2 ( $=C_2$ )
- d) Competitive Positioning                - assigned value = 1 ( $=C_1$ )

For the second task, Statement Block 1 is defined (011) whereby in each of the  $N$  Categories ( $N = 4$  in the above example),  $n$  statements are defined (where  $n = N$ ) ranked and assigned a value depending on their ranking ( $C_NQ_n..C_1Q_1$  where N and n both indicate the highest rank). As an example, for the Category Product Positioning the four ranked statements could be:

- a) We understand fully the product and/or service offerings from the supplier  
- assigned value = 4 ( $=C_4Q_4$ )
- b) The products and/or services from the supplier add value to our company  
- assigned value = 3 ( $=C_4Q_3$ )

- c) We are kept up-to-date with new product and/or service offerings from the supplier  
- assigned value = 2 ( $=C_4Q_2$ )
- d) Our competitors purchase products and/or services from the supplier  
- assigned value = 1 ( $=C_4Q_1$ )

For the third task, Statement Block 2 is defined (012) whereby each of the statements in Statement Block 1 are rewritten as defined in Claim 3 ( $C_Xq_x = C_XQ_x$ ). As an example, the above example statements could be written as follows:

- a) we fully understand their products and/or services ( $=C_4q_4$ )
- b) their products and/or services add value to our own products and/or services ( $=C_4q_3$ )
- c) we are regularly updated about their new products and/or services ( $=C_4q_2$ )
- d) they sell products and/or services to our competitors ( $=C_4q_1$ )

Distribute questionnaire survey phase (002):

The present invention allows the questionnaire survey to be distributed in a number of ways. As an example, but not exclusively, the questionnaire may be distributed for use in a standalone system, as a programme downloaded from a Local Area Network (LAN) e.g. a company intranet and ran on a single system or as a questionnaire survey on a Wide Area Network (WAN) e.g. the World Wide Web (WWW) for completion on a system in a remote location.

In a preferred embodiment of the present invention, summarised in Figure 3, the system advantageously provides a method for questionnaire survey originators (120,121,122) to measure customer satisfaction utilising the World Wide Web (101) as a distribution medium for the questionnaire survey. In the preferred embodiment the questionnaire survey is stored on a single server (102) in HTML (HyperText Markup Language) format, to which all customers being surveyed (103, 104, 105) have access to with a standard internet browser (e.g. Internet Explorer, Netscape, Opera etc.) on their local systems.

In order for the questionnaire survey originator to be able to manage which customers are able to complete the survey, a login procedure is used. The login procedure requires an identification to be input which singularly identifies the questionnaire survey originator and, as stated in Claim 14, a password consisting of alphanumeric characters which can either singularly



identify the customer (e.g. by using a customer number), identify that the customer is able to complete the questionnaire survey without identifying the customer as such (e.g. a randomly generated number, distributed randomly and anonymously to the customer) or not identify the customer at all (e.g. using a so called Master Key). These three methods allow the questionnaire survey originator to use a level of anonymity as required by their customers. The identifiers and passwords are stored in a database (106) on the single server (102). In the preferred embodiment, the database contains two linked tables, which are structured as shown (but not exclusively) in Figure 4. The Shortform (107) is the identification used by the questionnaire survey originator and Customer Name (108) the actual company name of the questionnaire survey originator. Folder (109) is the folder into which the data is to be stored on the server (102) and Industry (110) is an identifier which identifies in which industry the questionnaire survey originator's business is placed (e.g. a Standard Industry Code). Master Key (111) is the generic password which allows a customer to login without being identified. Identity Number (112) is a list of available identity numbers used to validate whether the current customer can partake in the survey. The identity number is either customer specific (e.g. a customer number) or randomly generated at the questionnaire survey set up stage and randomly distributed to the customers who should be partaking in the survey. The Used field (113) is used to check whether the customer has already submitted an input to the questionnaire survey or not (and can therefore be used to prevent multiple entries).

In the preferred embodiment, randomly distributing randomly generated numbers to customers is the preferred password method, as, despite its obvious additional work overhead of physically distributing the passwords, the benefits of providing an anonymous service to customers whilst simultaneously preventing double entries far outweighs the minimal extra overhead.

Questionnaire survey fulfilment phase (003):

The questionnaire survey fulfilment phase is summarised in Figure 5 and consists of three discrete blocks: the Company Ranking block (201), the Respondent Ranking block (202) and the Display Summary block (203).

The Company Ranking block (201) consists of four stages and is summarised in Figure 6:

In the Emotional Response stage (301), each statement from Statement Block 1 (011) ( $C_xQ_x$ ) is posed to the respondent as a question, to which the answer can only be "Yes", "No" or

“Don’t Know” – or similar, as stated in Claim 4. As an example, from the previous example, statement  $C_4Q_4$  with a question ranked value of 4 could be posed as:

“We understand fully the product and/or service offerings from The Gosling Group

☐ I know and agree

☐ I know, and don’t agree

☐ I don’t know.”

Following the respondent’s answer to the question, a positive response (I know and agree) is given a value  $V(C_XQ_X)$  of +1, a negative response (I know, and don’t agree) a value of –1 and a neutral response (I don’t know) a value of 0. This value is then weighted by the statement’s ranked value,  $x$  ( $xV(C_XQ_X)$ ). In the example above, if the respondent had checked the positive response (I know and agree) the weighted value would equal the statements value of 4 multiplied by +1 (for a positive result) = +4.

In the Emotional Sum stage (302) each Category defined in the questionnaire survey set-up stage (010) is assigned a value equal to the sum of responses per Category from the previous stage (301) ( $S(C_X) = \sum_{x=1}^{x=N} xV(C_XQ_X)$ ,  $X=N$  to 1). As an example, let’s simply assume that the resulting scores are:

- $S(C_4) = +3$  (Product Positioning)
- $S(C_3) = -2$  (Customer Service)
- $S(C_2) = +1$  (Total Quality)
- $S(C_1) = +1$  (Competitive Positioning)

In the Company Ranking stage (303), each Category is ranked according to it’s value  $S(C_X)$ , and given a Company Ranking value ( $R(C_X)$ ) of 1 for the highest rank and N the lowest rank.

In the above example, the ranking would therefore be:

- 1) Product Positioning  $R(C_4) = 1$  (The Ranking of Category  $C_4 = 1$ )
- 2) Total Quality  $R(C_2) = 2$
- 3) Competitive Positioning  $R(C_1) = 3$
- 4) Customer Service  $R(C_3) = 4$

NB for Categories with equal scores, the Category Ranking as defined in the questionnaire survey set-up phase takes precedent, so that in the example above, Total Quality (with a score sum of +1) takes a higher ranking than Competitive Positioning (also with a score sum of +1).

In the Don't Knows stage, all neutral response from the Emotional Response stage (301) are summed to give a "Don't Know" value per Category ( $D(C_X)$ ):

- $D(C_4) = 1$
- $D(C_3) = 2$
- $D(C_2) = 0$
- $D(C_1) = 1$

The Respondent Ranking block (202) consists of six stages and are summarised in Figure 7:

In the Removal stage (401), statements are removed from Statement Block 2 (012) according to the Company Ranking values  $R(C_X)$  allocated during the Company Ranking stage (303).

The actual statements removed are  $C_X q_{R(C_X)}$ , where  $X = N$  to 1. In our previous example therefore, for the Category "Product Positioning" where  $N=4$ , and the Ranking of Category  $C_4$   $R(C_4) = 1$ , statement  $C_4 q_1$  is removed i.e.:

"they sell products and/or services to our competitors".

For the Statement Selection stage (402), all statements with the same ranking value 'r' ( $r = n$  to 1) of Statement Block 2 (012) left over following the Statement Removal stage (401) are grouped together into n sets containing (N-1) statements ( $C_X q_r$ , for  $X = 1$  to N and where  $C_X q_r$  exists). The respondent is then asked to select the most important statement from each set. The respondent's selected statement is assigned a value ( $v(C_X q_r)$ ) of +1. All other statements in the set are assigned a value of -1.

As an example, the question to select a statement from each set, with  $C_1 q_3$  removed, could be posed as:

“Please select one of the statements which most aptly completes the sentence:

I believe it to be most important for a supplier that....

- ☐ their products and/or services add value to our own products and/or services ( $=C_4q_3$ )
- ☐ we know how their company is structured ( $=C_3q_3$ )
- ☐ we know how good the quality of their products and/or services is ( $=C_2q_3$ )”

The Rational Sum stage (403) involves giving each Category a value equal to the sum of responses per Category from the Selection stage (402)  $s(C_X) = \sum_{r=1}^{r=N} v(C_X q_r)$ ,  $X=N$  to 1. As an example, following the Rational Sum stage (403) the associated values could be:

- $s(C_4) = +2$  (Product Positioning)
- $s(C_3) = +1$  (Customer Service)
- $s(C_2) = +0$  (Total Quality)
- $s(C_1) = -1$  (Competitive Positioning)

The Compare stage (404) takes the statements removed at the Removal stage (401) and requests the respondent to rank the statements in order of priority from high to low. The Category given the highest ranking by the respondent is allocated a value  $M(C_X)$  of (N-1), the Category given the lowest ranking, a value of 0. All statements in between are valued accordingly. As an example, in order to request the respondent to rank the statements, the question could be posed as:

“Please rank the following statements as they apply to an ideal supplier in order of importance for your company:

- 1) They sell products and/or services to our competitors ( $=C_4q_1$ )
- 2) All contacts with them are handled quickly and professionally ( $=C_3q_4$ )
- 3) They deliver reliably on time, every time ( $=C_2q_2$ )
- 4) They offer us a fair price for their products and/or services ( $=C_1q_3$ )”

Assuming that after the respondent's ranking the order of these statements is as follows:

- 1) They deliver reliably on time, every time ( $=C_2q_2$ )
- 2) They offer us a fair price for their products and/or services ( $=C_1q_3$ )
- 3) All contacts with them are handled quickly and professionally ( $=C_3q_4$ )
- 4) They sell products and/or services to our competitors ( $=C_4q_1$ )

then each category would be allocated the following value  $M(C_X)$ :

- $M(C_2) = +3$
- $M(C_1) = +2$
- $M(C_3) = +1$
- $M(C_4) = +0$

The Final Rational Sum stage (405) gives a final value  $s(C_X) = s(C_X) + M(C_X)$ , for  $X=N$  to 1.

In the above example therefore the values would be:

- $s(C_4) = +2 + 0 = +2$
- $s(C_3) = +1 + 1 = +2$
- $s(C_2) = +0 + 3 = +3$
- $s(C_1) = -1 + 2 = +1$

The Respondent Ranking stage (406) then ranks each Category according to its value  $s(C_X)$ , and given a Respondent Ranking value ( $T(C_X)$ ) of 1 for the highest rank and N the lowest rank. In the above example, the ranking would therefore be:

- 1) Total Quality  $T(C_2) = 1$  (The Ranking of Category  $C_2 = 1$ )
- 2) Product Positioning  $T(C_4) = 2$
- 3) Customer Service  $T(C_3) = 3$
- 4) Competitive Positioning  $T(C_1) = 4$

By comparing the said Respondent Ranking (406) directly with the Company Ranking from the Customer Ranking stage (303) for closeness of match, a value for Respondent Satisfaction can be calculated as summarised in Claim 10. This is achieved by reverse ranking the said Company Ranking positions by assigning a value to the said Company Ranking positions ( $A(C_X)$ ) equal to the difference between each Category's Company Ranking positional value ( $R(C_X)$ ) and the total number of Categories plus 1 ( $N+1$ ). In the above example therefore:

- $A(C_4) = (4+1)-1 = +4$
- $A(C_2) = (4+1)-2 = +3$
- $A(C_1) = (4+1)-3 = +2$
- $A(C_3) = (4+1)-4 = +1$

Each Category is then assigned the reverse ranking value of Respondent Ranking positions ( $a(C_X)$ ) equal to the difference between each Category's Respondent Ranking positional value ( $T(C_X)$ ) and the total number of Categories ( $N$ ). In the above example therefore:

- $a(C_2) = 4-1 = +3$
- $a(C_4) = 4-2 = +2$
- $a(C_3) = 4-3 = +1$
- $a(C_1) = 4-4 = +0$

The value of Respondent Satisfaction (RS) is then given by  $\sum_{X=1}^{X=N} A(C_X) \cdot a(C_X)$ , and normalised to zero, by subtracting  $\left(\sum_{X=1}^{X=N} X(X-1)\right)/2$ . In the above example, therefore, Respondent Satisfaction is given by:

$$RS = (2*4) + (1*1) + (3*3) + (0*2) - ((4*3)+(3*2)+(2*1)+(1*0))/2$$

$$\therefore RS = 18-(20/2)$$

$$\therefore RS = 8$$

NB This formula for Respondent Satisfaction gives a quantity of  $1 + \left( \sum_{X=1}^{X=N} X(X-1) \right) / 2$  values from 0 (worst case) to  $+ \left( \sum_{X=1}^{X=N} X(X-1) \right) / 2$  (best case) i.e. 0 to +10 in the preferred embodiment with  $N=4$ .

The Display Summary block (203) outputs a textual summary as well as a graphical report to the respondent immediately following completion of the questionnaire survey according to Claim 15.

An example of a typical graphical output from the preferred embodiment is shown in Figure 8. The graph of Company Ranking (501) shows both positive and negative values, and is based upon the results from the Emotional Sum stage (302) and the Don't Knows stage (304) within the Company Ranking block (201). The bar height represents the sum ( $S(C_X)$ ) per Category from the Emotional Sum stage (302); the width of each bar represents the number of statements in Statement Block 1 (011) not answered with a neutral response at the Emotional Response stage (301) ( $n - D(C_X)$ ).

The graph of Respondent Ranking (502) is based on a normalised value of the sum ( $s(C_X)$ ) per Category at the Final Rational Sum stage (405) in the Respondent Ranking block (202). The normalised sum value is calculated by subtracting the largest negative value of the Category sum from each Category sum value and adding 1. For example if the  $s(C_X)$  sum results were as follows:

- $s(C_4) = +4$
- $s(C_3) = -2$
- $s(C_2) = +1$
- $s(C_1) = -1$

then the largest negative value is  $-2$  ( $s(C_3)$ ). Subtracting this value from each of the  $s(C_X)$  sums and adding 1 gives:

- $s(C_4) = +4 - (-2) + 1 = +7$
- $s(C_3) = -2 - (-2) + 1 = +1$
- $s(C_2) = +1 - (-2) + 1 = +4$
- $s(C_1) = -1 - (-2) + 1 = +2$

which would then be used to plot the Respondent Ranking bar graph (502).

In the preferred embodiment, a simple text report is also generated summarising both the Company Rankings and Respondent Rankings of the respondent's inputs and is based on the calculated values of  $S(C_X)$ ,  $D(C_X)$  and  $s(C_X)$  for each Category.

Questionnaire survey results analysis phase (006):

The questionnaire survey results analysis phase is summarised in Figure 9. In the preferred embodiment, the processing unit (604) is a software programme which takes the inputs from a plurality of respondents (601, 602, 603), summarises the results and delivers an Executive Summary (606) and N Category statistical reports, where N equals the number of Categories defined at the Category definition stage (010) at the questionnaire survey set-up phase (001) (607, 608).

In a preferred embodiment, the processing unit (604) is a server attached to the World Wide Web (600) and the inputs for the said processing unit are stored in a database (605) associated with the server.

In a preferred embodiment the processing unit (604) takes each of the sums from the Emotional Sum stage (302), the Don't Knows stage (304) and the Final Rational Sum stage (405) from each respondent (601, 602, 603) and stores them in a database (605). The processing unit (604) then uses the information stored in the database (605) summing each of the inputs to produce an Executive Summary report (606). An example of a typical Executive Summary report can be found in Figure 10. The said Executive Summary report contains a summary for Company Strength (701), which is calculated from the sum of Emotional Sums (302) by using the same procedure as that summarised in the Company Ranking stage (303) of the Company Ranking block (201); a summary for Amount of Uncertainty (702) which is a graphical summary of the number of responses which were "Don't Knows" from the Don't Know stage (304) per Category; a summary of Company Importance (703) which is calculated from the sum of Final Rational Sums (405) by using the same procedure as that summarised in the Respondent Ranking stage (406) of the Respondent Ranking block (202); a summary of Respondent Satisfaction according to Claim 10, in which both a 'Weighted' value (705) is calculated by measuring the closeness of match between the sum of Company Strength (701) and the sum of Company Importance (703) for all respondents according to the same methodology summarised in the Respondent Ranking block (202) above and an 'Average' value (704) calculated by mathematically averaging each respondent's value for Respondent Satisfaction according to that summarised in the Respondent Ranking block (202) above, are summarised.



The statistical analyses (607, 608) are produced by statistically analysing the inputs for each Category from all respondents' Emotional Sum stage (302)  $S(C_X)$ . An example of a typical Statistical Analysis output in the preferred embodiment can be found in Figure 11. In the preferred embodiment the Input Summary (801) is a graphical summary of all Emotional Sum (302) values for each Category from each respondent (601, 602, 603); the Statistical Analysis is a statistical analysis of all said Emotional Sum values, with a short textual summary of the results; the Company Implementation (803) is a numerical and textual summary of all respondents' Don't Knows per Category ( $D(C_X)$ ) from the corresponding Don't Knows stage (304) (Communication Factor); together with a summary of all said Emotional Sums  $S(C_X)$  from all respondents' Emotional Sum stages (302) (Company Strength) expressed as a normalised percentage of all Emotional Sums from all Categories; and all Rational Sums  $s(C_X)$  from all respondents' Final Rational Sum stages (405) (Company Importance) expressed as a normalised percentage of all Final Rational Sums from all Categories.

Other embodiments not described herein are also within the scope of the following claims.

What is claimed is: